

REMARKS

Applicants note with appreciation that claims 21, 24, and 25 are allowed, and that claims 3, 5-7, 10, and 23 are allowable if rewritten in independent form. Applicants wish to defer submission of claims 3, 5-7, 10, and 23 rewritten in independent form, pending the outcome of the present Amendment.

Claims 1, 2, 4, 8, 9, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petry, *et al.* (United States Patent Number 6,538,985) in view of Yonge, III (United States Patent Number 6,987,770). Reconsideration is respectfully requested.

Independent claim 1 is amended herein to clarify that “method for recognizing stations in a home network of an OFDM-based system, wherein the “home network includes starting and destination stations,” comprises “constructing, by the starting station, a recognition tone that corresponds to an assigned subchannel of the assigned subchannels for the node numbers of the starting station and the destination station, the recognition tone being constructed as a single OFDM symbol,” and “placing the single OFDM symbol in a frame for transmission.”

It is submitted that Petry, *et al.* and Yonge, III, alone or in combination, fail to teach or suggest a “method for recognizing stations in a home network of an OFDM-based system, wherein the “home network includes starting and destination stations,” comprising “constructing, by the starting station, a recognition tone that corresponds to an assigned subchannel of the assigned subchannels for the node numbers of the starting station and the destination station, the recognition tone being constructed as a single OFDM symbol,” and “placing the single OFDM symbol in a frame for transmission,” as claimed in independent claim 1.

The Office Action at page 3 cites Petry, *et al.* at column 4, lines 18-19 to support the position that Petry, *et al.* teaches “tones including the node number of the starting station and the node number of the destination station,” and being “constructed as a single OFDM symbol.” Applicants respectfully disagree with the position taken in the Office Action, and Applicants have reproduced Petry, *et al.* at column 4, lines 18-19 as follows in order to explain why the present invention as claimed in claim 1 is different than Petry, *et al.*

A contention PHY frame (also called a contention cycle) is used, to which nodes are synchronized, and each node "plays" a uniquely assigned identifier tone(s) in OFDM Fast-Fourier transform (FFT) frequency bins.

Petry, *et al.* teaches that "each node 'plays' a uniquely assigned identifier tone(s) in OFDM Fast-Fourier transform (FFT) frequency bins." However, Petry, *et al.* does not distinguish between a "node number" of a "starting station" and a "node number" of a "destination station." Further, one of skill in the art would readily understand that synchronizing nodes, as taught in Petry, *et al.* (see Petry, *et al.*, column 2, lines 14-21 and column 4, lines 56-65), is different than constructing "tones" as a "single OFDM symbol," as claimed. Thus, it follows that there is no teaching or suggestion in Petry, *et al.* of "constructing, by the starting station, a recognition tone that corresponds to an assigned subchannel of the assigned subchannels for the node numbers of the starting station and the destination station, the recognition tone being constructed as a single OFDM symbol," and "placing the single OFDM symbol in a frame for transmission," as claimed in amended independent claim 1.

Petry, *et al.* at column 4, line 66 through column 5, line 11 further refers to a node identifier of a transmitting node. Further, Petry, *et al.* at column 5, lines 12-26 describes how both contending nodes and non-contending nodes may decode identifier tones received in all FFT frequency bins. In particular, Petry, *et al.* teaches synchronizing nodes, and further teaches that each node is assigned a unique ID number that is mapped to frequency bins by transmitting a tone in each bin corresponding to each bit in the binary representation of the node's ID number (see Petry, *et al.* at column 2, lines 14-21). However, nowhere does Petry, *et al.* teach or suggest "constructing, by the starting station, a recognition tone that corresponds to an assigned subchannel of the assigned subchannels for the node numbers of the starting station and the destination station, the recognition tone being constructed as a single OFDM symbol," and "placing the single OFDM symbol in a frame for transmission," as claimed in amended independent claim 1.

The Office Action at page 3 further cites Petry, *et al.* at column 4, lines 24-27 to support the contention that Petry, *et al.* teaches "placing the single OFDM symbol in a frame for transmission," as claimed in independent claim 1. Applicants respectfully disagree, and have

reproduced Petry, *et al.* at column 4, lines 24-27 as follows in order to explain why the present invention, as claimed in claim 1 is different than Petry, *et al.*

Under the preferred embodiment of the inventive MAC protocol, each LAN node is assigned a LAN-unique node identifier that is the index of an FFT frequency bin. The node identifier is played in each contention cycle by each node that has data to transmit.

Although Petry, *et al.*, teaches that each LAN node is assigned a LAN-unique node identifier, which is well-known to those of ordinary skill in the art, Petry, *et al.* nevertheless fails to teach or suggest “constructing, by the starting station, a recognition tone that corresponds to an assigned subchannel of the assigned subchannels for the node numbers of the starting station and the destination station, the recognition tone being constructed as a single OFDM symbol,” as claimed in amended independent claim 1. Therefore, it follows that Petry, *et al.* fails to teach or suggest “placing the single OFDM symbol in a frame for transmission,” as claimed in amended independent claim 1.

Yonge, III likewise fails to teach or suggest a “method for recognizing stations in a home network of an OFDM-based system, wherein the “home network includes starting and destination stations,” comprising “constructing, by the starting station, a recognition tone that corresponds to an assigned subchannel of the assigned subchannels for the node numbers of the starting station and the destination station, the recognition tone being constructed as a single OFDM symbol,” and “placing the single OFDM symbol in a frame for transmission,” as claimed in amended independent claim 1.

In addition, it is submitted that Petry, *et al.* and Yonge, III, alone or in combination, fail to teach or suggest “stations other than the starting station detecting the tones from the frame, recovering the node numbers of the starting station and the destination station using indices of the subchannels obtained from the tones, and recognizing the starting station and the destination station,” as claimed in independent claim 1.

Petry, *et al.* fails to teach or suggest “stations other than the starting station detecting the tones from the frame, recovering the node numbers of the starting station and the destination station using indices of the subchannels obtained from the tones, and recognizing the starting

station and the destination station,” as claimed in independent claim 1, as noted in the Office Action at page 3.

Yonge, III teaches a forwarding frame structure 800 that includes a destination station address (DA) field 108, a starting station address (SA) field 110, and an intermediate station address (IA) field 823 (see Yonge, III, Figure 40). Yonge, III further teaches a source station A that delivers frames to a destination station B through an intermediate station I according to the forwarding frame structure 802 (see Yonge, III, column 45, lines 40-43). However, while Yonge, III teaches stations, such as intermediate station I, that can receive a frame that includes source and destination addresses (SA), (DA), this is different from the present invention as claimed in claim 1, wherein, when a “station” other than a “starting station” detects “tones” from the received “frame,” recovers a “node number” of a “destination station” “using indices” of “subchannels obtained from the tones.” Instead, in Yonge, III, the intermediate station I matches its own address with the address contained in the IA field 823, and if they are identical, the intermediate station I returns a response 804, or otherwise returns a NACK or FAIL to the source station A (see Yonge, III, column 46, lines 11-18). However, there is no teaching or suggestion in Yonge, III of “stations other than the starting station” detecting “tones” from the “frame,” and recovering “node numbers of the starting station and the destination station” using “indices of the subchannels obtained from the tones,” as claimed in amended independent claim 1. In particular, there is no mention in Yonge, III of a usage of a subchannel index when decoding the intermediate station address (IA).

With regard to the rejection of independent claim 22 based on Petry, *et al.* and Yonge, III, Applicants note that independent claim 22 includes the limitations of allowable claim 5. In particular, independent claim 22 was added in Amendment B filed on March 10, 2008 in response to the Office Action dated December 11, 2007, which stated that claim 5 would be allowable if rewritten in independent form. Accordingly, since claim 22 includes the limitations of claim 5, specifically, “a station that determines that it is the destination station receives additional symbols of the frame, while stations other than the destination station do not receive the additional symbols of the frame,” it is submitted that Petry, *et al.* and Yonge, III, alone or in combination, fail to teach or suggest the present invention as claimed in independent claim 22.

Accordingly, since Petry, *et al.* and Yonge, III fail to teach or suggest the claimed features set forth in independent claims 1 and 22, there is no way to combine the references to obtain such teaching or suggestion of the claimed features, and therefore, there is no combination of the references that teaches or suggests the invention set forth in claims 1, 2, 4, 8, 9, and 22. Claims 1, 2, 4, 8, 9, and 22 are therefore believed to be allowable over the cited references. Accordingly, reconsideration of the rejections of claims 1-5, 8, 9, and 22 under 35 U.S.C. 103(a) based on the combination of Petry, *et al.* and Yonge, III, and allowance of the claims, are respectfully requested.

In view of the amendments to the claims and the foregoing remarks, it is believed that, upon entry of this Amendment, all claims pending in the application will be in condition for allowance. If a telephone conference will expedite prosecution of the application, the Examiner is invited to telephone the undersigned.

While it is believed that there are no fees at this time, authorization is hereby given to charge Deposit Account No. 501798 for any fees which may be due or to credit any overpayment.

Respectfully submitted,

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